ATTACHMENT
N65540-03-Q-0577

SAIL SYSTEM SUIPPORT KIT SPECIFICATION

1.0 General

The Sail System Support Kits to be furnished under Item 0001 shall consist of the following components:

Description	Qty per kit	Part No.	Note
Hoist Cylinder Extracting Screws	3	7377750	
Special Face Spanner Wrench	1	7377879-1	
T-Handle Box Wrench	1	7377886-1	
Spacer Ring	1	7377889	
Hoist Cylinder Lifting Tool	1	7377890-1	
Mast Fairing Lifting Tool	1	7377883-1	
Internal Bearing Lifting Tool	1	7377880-1	
Hydraulic Adapter Assembly	1	7225784 (mod)	1
Plate	1	7377736	2
5/16-18 UNC-2A x ½" LG Shoulder Eyebolts	4	Commercial Item	

Notes

1. Use the closest standard English end fittings in place of the metric end fittings called out on the drawings. DO NOT remove hydraulic fittings after testing.
2. The plate shall be installed on the Hydraulic Adapter Assembly for shipping.

The Technical Data to be furnished under Item 0002 shall be in accordance with the requirements contained herein and in accordance with the DD Form 1423, Contract Data Requirements List, Exhibit A.

2.0 Referenced Documents:

a. 7377750, Rev A: Hoist Cylinder Extracting Screw
b. 7377879, Rev A: Special Face Spanner Wrench Assembly and Details
c. 7377886, Rev A: T-Handle Box Wrench Assembly and Details
d. 7377889, Rev A: Spacer Ring
e. 7377890, Rev A: Hoist Cylinder Lifting Tool Assembly and Details
f. 7377883, Rev A: Mast Fairing Lifting Tool Assembly and Details
g. 7377880, Rev A: Internal Bearing Lifting Tool Assembly and Details
h. 7225784, Rev A: Hydraulic Adapter Assy
i. 7225849, Rev A: Adapter Body
j. 7377812, Rev C: Adapter (SEE NOTE 1 BELOW)

k. 7225891, Rev A: Connector Tube
l. 7225892, Rev A: Connector Tube
m. 7225897, Rev A: Pin
n. 7377507, Rev A: Pin
o. 7377736, Plate
p. PPS 7225759, Rev A: Procedure/Product Specification for Painting Hoist Cylinder Assy and Adapter of UMM
q. PPS 7225971, Rev A: Procedure/Product Specification for Cleaning and Fluxing UMM Cylinder Adapter
r. 7535160, Rev A: UMM Special Tool Identification Plate
s. TP 9612-T-203:Hydraulic Cylinder Lifting Tool Weight Test Certification
t. TP 9612-T-204: Mast Fairing Lifting Device Weight Test Certification
u. TP 9612-T-206: Internal Bearing Lifting Tool Weight Test Certification

NOTE:

1. The contractor shall disregard Note 3 on drawing 7377812, Revision C for the Adapter and shall comply with the quality assurance requirements contained in this specification.

3.0 Quality Assurance Requirements:

3.1. Contractor's Quality/Inspection System:

a. The contractor shall establish and maintain a written inspection system, which will assure that all supplies and services submitted to the Government for acceptance conform to contract requirements whether manufactured or processed by the contractor, or procured from subcontractors or vendors. The contractor shall perform or have performed the inspections and tests required to substantiate product conformance to drawing, specifications and contract requirements and shall also perform or have performed all inspections and tests otherwise required by the contract. The contractor's inspection system shall be documented and shall be submitted for review to the Naval Surface Warfare Center Carderock Division – Philadelphia Site, Naval Business Center, Bldg. 29, Phila., PA 19112-5083, Attn. Code 9613, fifteen (15) days after award. The contractor shall notify the Naval Surface Warfare Center Carderock Division – Philadelphia Site in writing of any change to the inspection system. The inspection system shall be subject to disapproval if changes thereto would result in nonconforming product. Vendors currently operating under ANSI/ISO/ASQ Q9001-2000 or MIL-I-45208 quality system will be deemed acceptable under this provision.

b. The Quality/Inspection System shall include the following:

1) Document Control

2) Purchasing
3) Control of Customer Supplied Material (Government Furnished Material)
4) Product Identification and Traceability
5) Process Control
6) Inspection and Testing
7) Inspection Measuring and Test Equipment Calibration in accordance with the requirements of ANSI/NCSL Z540-1 or ISO 10012-1.
8) Inspection and Test Status
9) Control of Nonconforming Product
10) Corrective Action
11) Handling, Storage, Packaging, and Delivery
12) Records
13) Controls to assure sub-contractors comply with contract quality system requirements.

3.2. Procedures:

1) Nondestructive Test Procedures in accordance with NAVSEAT9074-AS-GIB-010/271 for:

a) Dye Penetrant

b) Visual.

2) A written welding procedure and welder Qualification data in accordance with NAVSEA S9074-AR-GIB-010/278.

3.3. Records:

a. For each assembly, component, delivered item, the supplier shall furnish one (1) copy of the following documents correlated to the contract number and serial number assigned to the assembly:

1) For Contractor-Furnished Raw Material:

a) For contractor-supplied material, the contractor shall supply documented verification of raw material by alloy families using simple, direct and rapid analysis methods or a combination of methods (e.g., visual, hardness test, magnetic properties test, acid spot tests, and metal comparator tests).

2) Copies of qualifications of personnel performing welding under this contract in accordance with NAVSEA S9074-AQ-GIB-010/248.

3) Test reports showing the results of non-destructive testing inspections. Report must include joint identification, plan number, piece number, compliance to

NAVSEA T9074-AS-GIB-010/271 for procedures used, and show acceptance to:

a) Visual Inspection of Welds - MIL-STD-2035.

b) Dye Penetrant Testing - MIL-STD-2035.

4) Copies of current qualifications to NAVSEA T9074-AS-GIB-010/271 for personnel performing and evaluating the results of non-destructive test.

5) Copies of test reports showing the results of:

a) Weight/Holding capacity test

6) The inspection records shall show the results of every dimension inspected and shall include the inspector's signature and date. The inspection records are to be maintained on Objective Quality Evidence Data Sheets (OQEDS) supplied by the contractor. Recording the results of dimensional inspections on a configuration facsimile of the component as shown on the applicable drawing is an acceptable OQED.

a) ACTUAL measurements are required for the following characteristic:

(1) Dimensions with a tolerance of +/- .005 or less"

(2) Straightness of .010" per foot or less

(3) Geometric characteristics (forms, profile, orientation, location, run out, etc.) with a tolerance of .010" or less

(4) Finishes 32 or less.

(5) Angles +/- ½ degree or less

(6) Torque Records

b) Class 2 Threads shall be inspected in accordance with ASME B1.3, System 21 requirements and Class 3 threads or higher shall be inspected in accordance with ASME B1.3, System 22 requirements.

c) Sampling inspection is permitted under this contract. A sampling plan identifying the parts and the sample size must be submitted to NSWCCD-Phila code 9613 for approval prior to completion of inspection.

d) Complete inspection report showing the results of visually inspecting O-rings used in the assembly. This report shall have attached the individual O-ring

packages that the O-rings were supplied in and shall show the cure date of each O-ring.

e) All of the supplied documents shall have complete traceability to the hardware for inspection purposes. Therefore, whenever applicable, records shall show: contract number, name of contractor, plan number, revision letter, piece number, serial letter/number of finished piece, and item nomenclature.

f) Documented list of all material used in each finished and delivered assembly. A qualification summary sheet that will summarize and correlate all of the Objective Quality Evidence to support product quality. The contractor will supply certifications summary sheet blanks, used by the contractor.

g) Records for each assembly, component, delivered item shall identify the inspection, measuring, test equipment, calibration dates and calibration due dates for inspection, measuring, and test equipment used during verifications, inspections, and/or tests.

3.4 Mercury Exclusion Clause:

a. Mercury Contamination: The supplies furnished under this contract shall contain no metallic or mercury compounds and shall be free from mercury contamination (i.e., during the manufacturing process, testing, or inspecting) or shall be on the List of Mercury-Containing Material/Equipment approved by NAVSEA, enclosure (1) of NAVSEAINST 5100.3C. Any material/ equipment so listed shall have label plates as prescribed in enclosure (3) of NAVSEAINST 5100. 3C. The supplies offered shall not have come in direct contact with mercury or any of its compounds nor with any mercury-containing device employing only a single boundary of containment. (A single boundary of containment is one, which is not backed by a seal or barrier.) Mercury contamination of the supplies will be cause for rejection of the material.

b. If there is reasonable cause to suspect the supplies of being contaminated by mercury, the following test may be used to determine whether contamination by metallic mercury exists: Enclose the equipment in a polyethylene bag or close-fitting airtight container and place in an oven at 135 degrees F $\pm$5 degrees F for one hour. Sample the trapped air and if mercury vapor concentration is 0.0 mg/cu meter or more, the material is mercury contaminated insofar as the requirements of this contract are concerned. Mercury vapor concentration can be determined with a mercury vapor detector such as a portable General Electric Vapor Detector (Catalog No. 8257557G-3), Bechman Instrument Model K-23, or other instruments that have equivalent range and capabilities. It should be noted that certain vapors such as benzene interfere with this type of mercury vapor detector and the detector should never be zero adjusted in any suspect atmosphere.

c. If the inclusion of metallic mercury or mercury compounds is required as a functional part of the material furnished under this contract, the contractor shall obtain written approval from NAVSEA before proceeding with manufacture. The contractor's request shall explain in detail the requirement for mercury, identify specifically the parts to contain mercury, and explain the method of protection against mercury escape. Such a request will be forwarded to the Government Inspector or Government Representative with a copy to NAVSEA. Upon approval by NAVSEA, the vendor will provide a warning plate as prescribed by enclosure (2) of NAVSHIPSINST 5100.28 which will include a statement that mercury is a functional part of the item and also the name and location of that part.

d. If and to the extent that this contract calls for work to be performed by the contractor on a submarine, the contractor, in connection with such work, shall not bring into or utilize in the submarine any instrument or other device containing metallic mercury or mercury compounds, unless such equipment, instrument, or device has been approved by the Naval Sea Systems Command or authorized representative for use on a submarine.

e. The contractor is required to certify via a certificate of compliance that:

1) The supplies furnished under this contract contain no metallic mercury or mercury compounds.

2) The contractor has taken responsible steps to ensure that the supplies furnished under this contract are not contaminated with metallic mercury or mercury compounds.

f. The requirements of this clause shall be included in all subcontracts hereunder. Technical question pertaining to the requirements of this clause shall be referred to NAVSEA via the Government Inspection or Representative.

3.5 Inspection and Test Requirements

a. The contractor is required to perform all inspections to ensure the quality of the finished item and for providing inspection and test equipment necessary to ensure that the results of inspections and tests are accurate.

b. Representatives of an assigned Contract Administration Office (CAO) shall make inspection of the supplies and services to be furnished hereunder, at the contractor's or subcontractor's plant (source).

c. Due to the critical nature of this material, a representative of NSWCCD, Code 9613, is available to furnish technical assistance on all quality control matters.

The contractor shall agree to notify the Naval Surface Warfare Center Carderock Division – Philadelphia Site, Naval Business Center, Bldg. 29, Phila., PA 19112-5083, Attn. Code 9613, when material is ready for inspection so NSWCCD has the option of conducting a quality assurance surveillance on the material at the contractor's plant prior to shipment. A minimum of seven (7) days is required to arrange such a visit.

d. This contract shall not be considered complete unless all documents and items required to be delivered under this contract are received and determined to be acceptable by the contracting officer.

e. Unless otherwise specified, the supplier is responsible for the performance of all inspection requirements as specified herein. The Government reserves the right to perform any of the inspections set forth in the above requirements where such inspections are deemed necessary to ensure that supplies and services conform to requirements.

f. Requests for engineering changes, waivers, or deviations shall be submitted using Forms DD 1692 and 1694 and MIL-STD-973 as a guide. A "Request for Waiver" shall be used for government acceptance of all Type I and Type II nonconformance.

g. Final acceptance will be performed by NSWCCD, Philadelphia. Final acceptance by NSWCCD does not relieve the supplier of performing final inspection and test and delivery of the material in accordance with description requirements.

4.0 Packaging and Marking:

4.1 All material to be delivered under this contract shall be packed in accordance with the latest edition of ASTM D3951-95 "Commercial Packaging of Supplies and Equipment", in effect on the date of contract award.

4.2 The contractor shall mark all shipments under this contract in accordance with the latest edition of ASTM D3951-90 "Commercial Packaging of Supplies and Equipment", in effect on the date of contract award.

4.3 The following markings shall be applied to the exterior of the shipping crates:

a. Contract Number
b. Drawing Number
c. Piece Number
d. Serial Number

5.0 Time and Place of Delivery:

5.1 Delivery of all items shall be within 180 days after date of order.

5.2 All items shall be delivered to the following address:

NSWCCD-SSES
Naval Business Center, Bldg. 542
Philadelphia, PA 19112
Attn: Code 9633